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MEDIUM-MU TRIODE— SHARP-CUTOFF PENTODE

9-PIN MINIATURE TYPE
Intended for use in equipment having
series heater-string arrangement

GENERAL DATA

Electrical:

Heater, for Unipotential Cathodes:

Voltage 6.3 ac or dc volts
Current 0.6 amp
Warm-up time (Average). . . 11 sec

For definition of heater warm-up time and method of determining it, see sheet HEATER WARM-UP TIME MEASUREMENT at front of this Section.

Direct Interelectrode Capacitances:⁰

Triode Unit:

Grid to plate 2.2 μf
Grid to cathode and heater. 2.6 μf
Plate to cathode and heater 0.34 μf

Pentode Unit:

Grid No.1 to plate. 0.044 μf
Grid No.1 to cathode & grid No.3
& internal shield, grid No.2, and
heater. 7.5 μf
Plate to cathode & grid No.3
& internal shield, grid No.2,
and heater. 2.4 μf
Triode grid to pentode plate. 0.022 max. μf
Pentode grid No.1 to triode plate . . . 0.006 max. μf
Pentode plate to triode plate 0.12 max. μf

Characteristics, Class A₁ Amplifier:

	Triode Unit	Pentode Unit	
Plate-Supply Voltage.	150	200	volts
Grid-No.2-Supply Voltage. . . .	—	125	volts
Cathode Resistor.	150	82	ohms
Amplification Factor.	40	—	
Plate Resistance (Approx.). . . .	8200	150000	ohms
Transconductance.	4900	7000	μmhos
Plate Current	9	15	ma
Grid-No.2 Current	—	3.4	ma
Grid-No.1 Voltage (Approx.) for plate current of 100 μamp .	-6.5	-8	volts

Mechanical:

Mounting Position Any
Maximum Overall Length. 2-5/8"
Maximum Seated Length 2-3/8"
Length, Base Seat to Bulb Top (Excluding tip) . . 2" $\pm$ 3/32"

⁰ without external shield.

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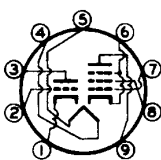


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Maximum Diameter 7/8"
 Dimensional Outline. See General Section
 Bulb T-6-1/2
 Base Small-Button Noval 9-Pin (JETEC No.E9-1)
 Basing Designation for BOTTOM VIEW 9DX

Pin 1 – Triode
 Cathode
 Pin 2 – Triode
 Grid
 Pin 3 – Triode
 Plate
 Pin 4 – Heater
 Pin 5 – Heater



Pin 6 – Pentode
 Cathode,
 Grid No.3,
 Internal
 Shield
 Pin 7 – Pentode
 Grid No.1
 Pin 8 – Pentode
 Grid No.2
 Pin 9 – Pentode
 Plate

AMPLIFIER - Class A₁

Maximum Ratings, Design-Center Values:

	Triode Unit	Pentode Unit	
PLATE VOLTAGE.	300 max.	300 max.	volts
GRID-No.2 (SCREEN) SUPPLY VOLTAGE.	-	300 max.	volts
GRID-No.2 VOLTAGE.	-	See Grid-No.2 Input	
Rating Chart at front of Receiving Tube Section			
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Positive bias value. . .	0 max.	0 max.	volts
PLATE DISSIPATION.	2.5 max.	3 max.	watts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 150 volts.	-	1 max.	watt
For grid-No.2 voltages between 150 and 300 volts.	-	See Grid-No.2 Input	

Rating Chart at front of Receiving Tube Section

PEAK HEATER-CATHODE

VOLTAGE:

Heater negative with respect to cathode . .	200 max.	200 max.	volts
Heater positive with respect to cathode . .	200▲max.	200▲max.	volts

▲ The dc component must not exceed 100 volts.



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Maximum Circuit Values:

	<i>Triode Unit</i>	<i>Pentode Unit</i>	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation. .	0.5 max.	0.25 max.	megohm
For cathode-bias operation.	1.0 max.	1.0 max.	megohm

OPERATING CONSIDERATIONS

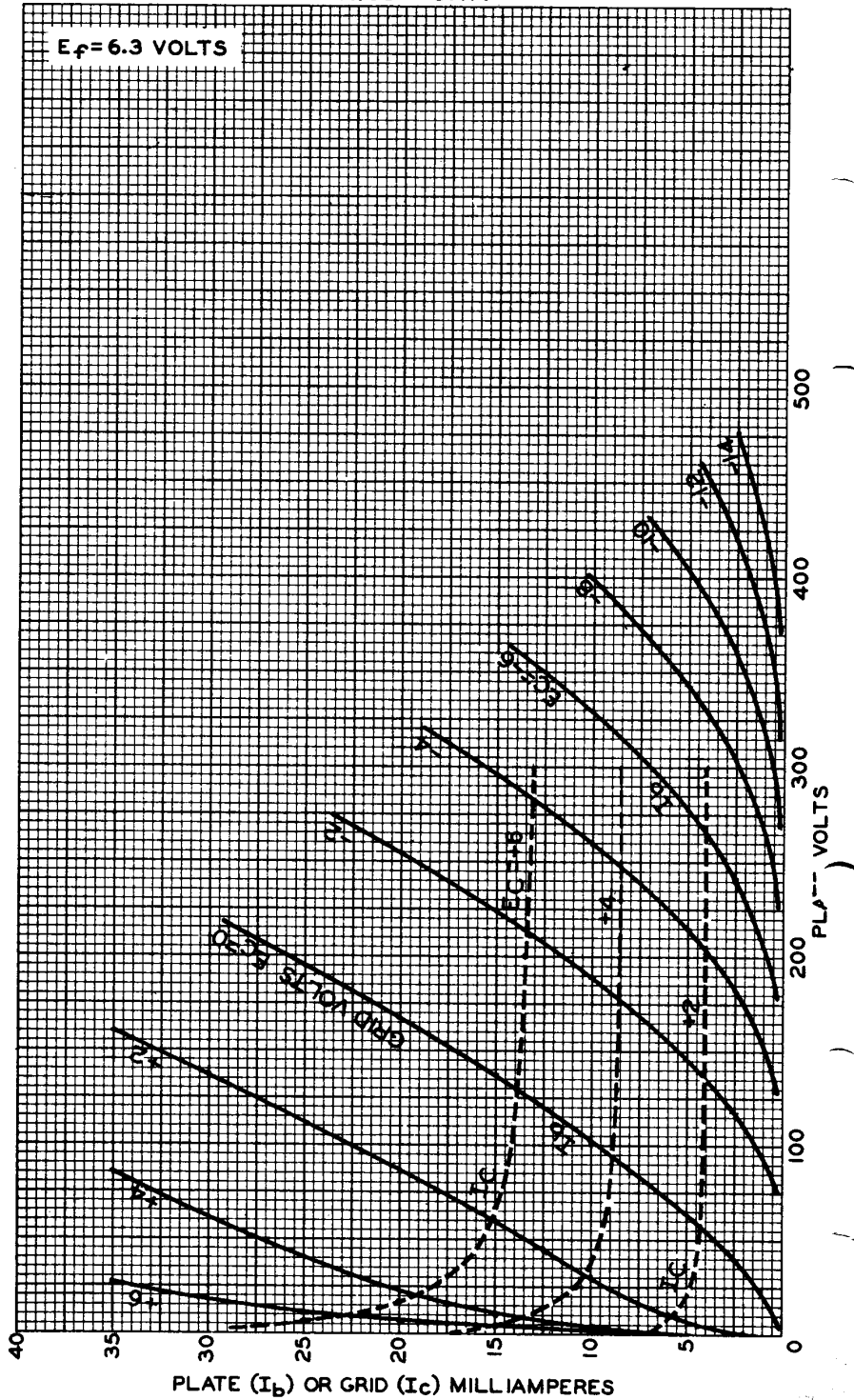
Because the *internal shield* is connected to the cathode and grid No.3, the impedance in the cathode circuit should be kept as low as possible to minimize cross-coupling effects.

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AVERAGE CHARACTERISTICS TRIODE UNIT



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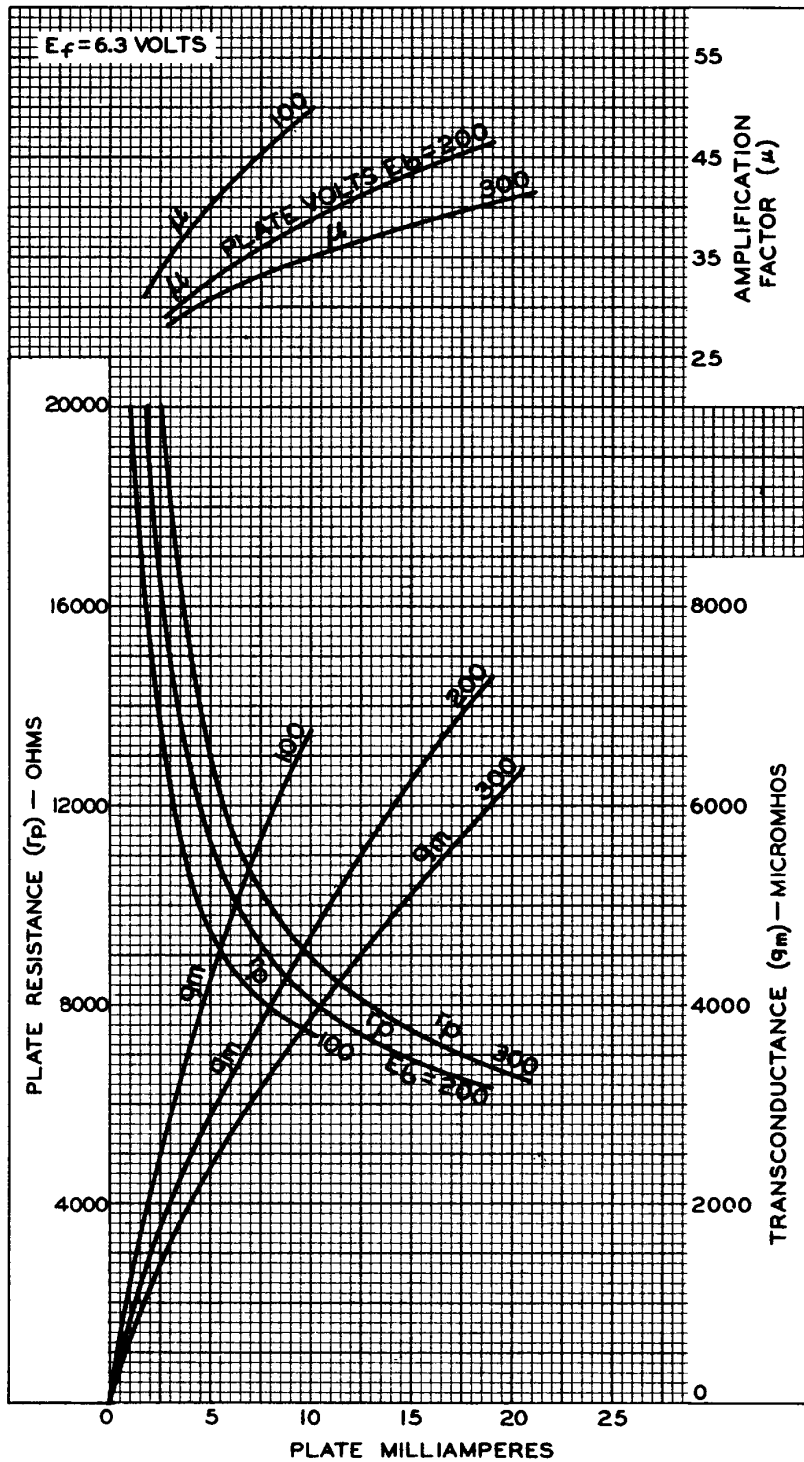
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AVERAGE CHARACTERISTICS
TRIODE UNIT

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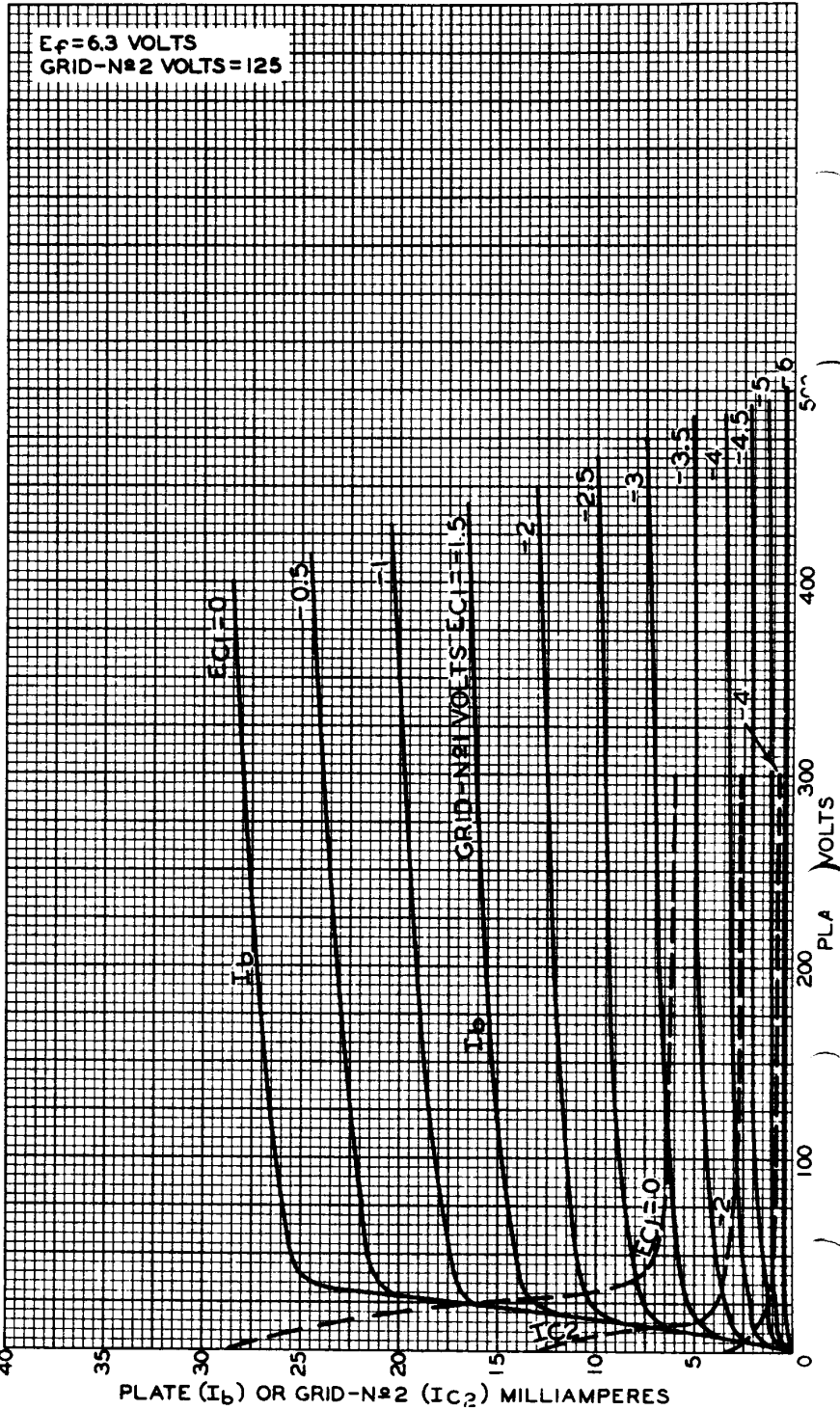
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AVERAGE CHARACTERISTICS PENTODE UNIT



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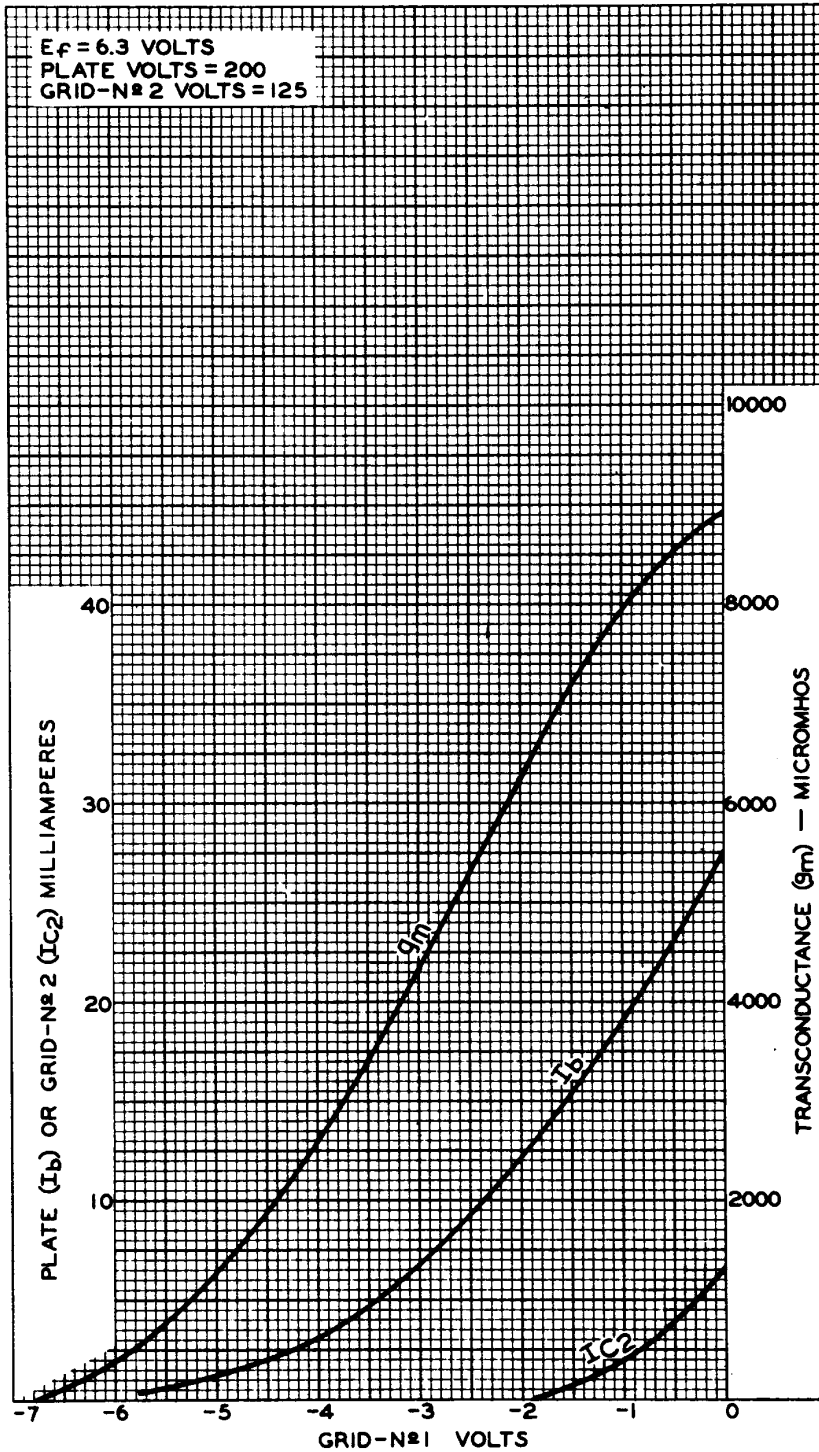


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AVERAGE CHARACTERISTICS FOR PENTODE UNIT

$E_f = 6.3$ VOLTS
PLATE VOLTS = 200
GRID-N#2 VOLTS = 125



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